

EFFECTIVENESS OF BOM (BREAST CARE, OXYTOCIN MASSAGE AND MARMET TECHNIQUE) TECHNIQUE ON BREAST MILK SECRETION AMONG POSTNATAL MOTHERS ADMITTED IN SVBP HOSPITAL, MEERUT, U.P

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ABSTRACT

Breastfeeding plays a vital role in ensuring the health and survival of newborns. However, inadequate breast milk secretion and delayed lactation is a common problem among postnatal mothers, which can affect neonatal nutrition and growth. Non-pharmacological interventions such as Breast Care, Oxytocin Massage, and the Marmet Technique (BOM) have been suggested to enhance lactation naturally and effectively.

Objective: A study to assess the effectiveness of BOM (Breast care, Oxytocin massage and Marmet) Technique on breast milk secretion among postnatal mothers admitted in SVBP hospital, Meerut”.

Methodology: this study was conducted in Postnatal ward in SVBP Hospital, Meerut. 60 postnatal mothers by using convenient sampling technique who met the eligibility criteria and written consent was taken from Postnatal mothers A true experimental pre-test post-test control groups design was adopted. breast milk measure was using a Standardized Milk Volume Measurement Sheet before and after the intervention. Data were analyzed using descriptive and inferential statistics.

Results: The finding revealed a statistically significant improvement of breast milk secretion in post- test in the experimental group compared to the control group ($p < 0.05$). the experimental group showed a marked improvement of breast milk secretion in postnatal mothers after the BOM technique, supporting its effectiveness of BOM technique on breast milk secretion among postnatal mothers.

Conclusion: BOM is an effective, simple, and non- invasive technique to improve the breast milk secretion among postnatal mothers. Incorporating BOM technique in to standard protocol care can enhance postnatal mothers breast milk secretion, reduce dependence on pharmacological analgesics and promote holistic wellbeing of postnatal mothers and newborn.

KEYWORDS: BOM (breast care, oxytocin massage and Marmet technique), Caesarean section, Non- pharmacological Intervention, Postnatal mothers.

INTRODUCTION

Globally, breastfeeding practice have improved the breast milk secretion over time, however, they still remain suboptimal. And recent data indicate that only about 48% of infant under six months of age are exclusively breastfeed worldwide, which is still below the global target of at least 50% set by WHO for 2025. This means that more than half of infants do not receive the full benefits of exclusive breastfeeding during the most critical period of their early life. Furthermore, its has been estimated that improving breastfeeding practice could prevent over 820,000 child death annually, highlighting its life- saving period.,

Breastfeeding not only benefits infants but also contribute significantly to maternal health. Breastfeed children are less likely to suffer from infection such as diarrhea and respiratory illness, and they tend to perform better in cognitive development and intelligence tests. In the long term, breastfeeding reduces the risk of obesity, diabetes, and other non-communicable disease. For mothers, breastfeeding lower the risk of breast cancer, ovarian cancer and type 2 diabetes. Despite these well- documented in written benefits, many postnatal mothers face challenges in initiating and maintaining adequate breast milk secretion.

One of the major barriers to successful breastfeeding is inadequate breast milk production, especially during the early postnatal period. Many studies indicate that inadequate breast milk secretion contributes to nearly 16% of child death globally. Factors influencing breast milk secretion include maternal stress, poor breastfeeding technique, lack of knowledge, hormonal imbalance, cesarean section delivery, and insufficient support from healthcare professionally. Additionally, socio- cultural practice and aggressive marketing of breast milk substitute further hinder optimal breastfeeding practice.

OBJECTIVES WERE:

1. To assess the pre and posttest level of breast milk secretion among postnatal mothers.
2. To determine the effectiveness of BOM technique on breast milk secretion among postnatal mothers.
3. To find the association between the level of breast milk secretion among postnatal mothers and their selected demographic variables.

METHODOLOGY

The researcher selected 60 postnatal mothers by using convenient sampling technique who met eligibility criteria and written consent was taken from sample by describing the purpose of the study and convinced for confidentiality of the information provided. A true experimental pre- test and post - test control research design was adopted. The data was collected from postnatal mothers admitted in the postnatal ward in SVBP Hospital with the Standardized Milk Volume Measurement Sheet, after the implementation of intervention BOM Technique post test was conducted. Descriptive and inferential statistics used for data analysis.

INCLUSION CRITERIA

- A. Postnatal mothers who were within 1 to 5 days postpartum.
- B. Mothers who have undergone normal vaginal delivery or cesarean section.
- C. Mothers who were physically stable and able to participate in the BOM technique intervention.
- D. Mothers willing to give informed consent to participate in the study.

EXCLUSION CRITERIA

- A. Mothers with medical conditions that contraindicate breastfeeding (e.g., HIV positive, active tuberculosis).
- B. Mothers with breast abnormalities or surgeries that affect milk secretion.
- C. Mothers with severe postpartum complications or critical illness (e.g. breast abscess, breast engorgement)

RESULTS

The finding of the study is presented according to the objective of the study. The data is prepared under the subsequent section-

Table 1 Description of background variables of the Postnatal mothers (N=60)

S.no	Background variables	Frequency (n)	Percentage (%)
1.	Age		
	Below 20	1	3
	20-25	12	40
	26-30	15	50
	Above 30	2	7
2.	Education qualification		
	No formal education	8	26
	Primary education	9	30
	Secondary education	11	37
	Graduate and above	2	7
3.	Occupation		
	Home- maker	15	50
	Private job	10	34
	Governmental job	1	3
	Self- employed	4	13
4.	Religion		
	Hindu	17	57
	Muslim	13	43
	Other (specify)	0	0
5.	Type of family		
	Nuclear	8	27
	Joint	19	63
	Extended	3	10
6.	Area of residence		
	Rural	13	43
	Urban	11	37

	Semi-Urban	6	20
7.	Parity		
	Primipara	20	67
	Multi-para	9	30
	Grand multipara	1	3
8.	Breast feeding experience		
	Yes	9	30
	No	21	70
9.	Type of delivery		
	NVD	16	53
	LSCS	14	47
	Assisted delivery	0	0
10.	Income		
	<10,000/-Rs	4	13
	10,001/-Rs – 20,000/-Rs	19	64
	20,001/-Rs – 30,000/-Rs	6	20
	>30,000/-Rs	1	3

Table 2: Frequency and percentage distribution regarding the breast milk secretion of among postnatal mothers of Experimental group N=30

S.no	Scoring categories	Pre – test		Post – test	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Very low	1	3	0	0
2.	Low- Normal	9	30	0	0
3.	Normal	18	60	14	47
4.	High	2	7	11	37
5.	Very high	0	0	5	16

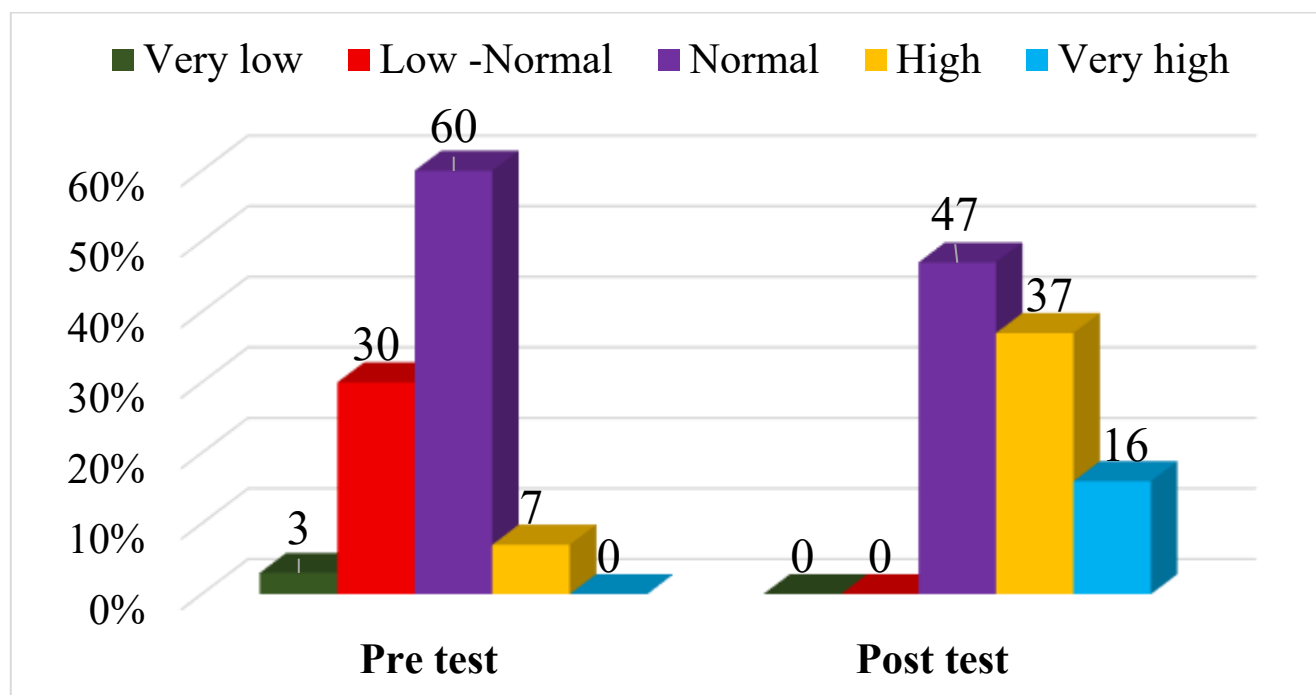


Figure 1: Percentage distribution of breast milk secretion among postnatal mothers in Experimental group

Table 3: Frequency and percentage distribution regarding the breast milk secretion of among postnatal mothers of Control group N=30

S.no	Scoring categories	Pre – test		Post – test	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Very low	0	0	0	0
2.	Low- Normal	3	10	0	0
3.	Normal	21	70	11	37
4.	High	6	20	18	60
5.	Very high	0	0	1	3

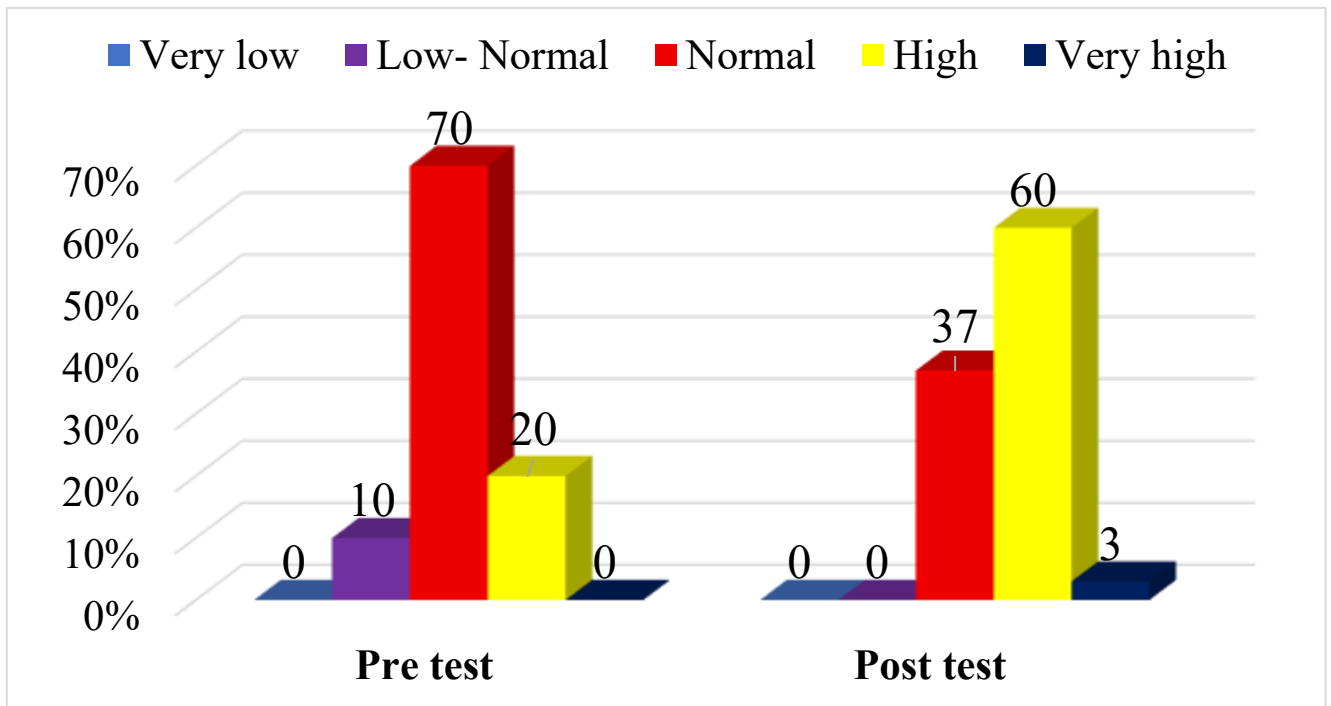


Figure 2: Percentage distribution of breast milk secretion among postnatal mothers in Control group

Table 4: Comparison between mean Pre – test and Post – test score of breast milk `secretion among the postnatal mothers in Experimental group. N= 30

Parameter	M ± SD	Mean difference	Paired t test	df	p value	Inference
Pre – test	9.37 ± 3.05	10.53	11.45	29	0.000	Significant
Post – test	19.90 ± 5.05					

(p<0.05 significant level) S- Significant

Table 5: Comparison between mean Pre – test and Post – test score of breast milk secretion among the postnatal mothers in Control group. N=30

Parameter	M ± SD	Mean difference	Paired t test	df	p value	Inference
Pre – test	12.1±2.80	4.8	7.022	29	0.000	Significant
Post – test	16.9±4.25					

(p<0.05 significance level) S- Significance

Table 6: Comparison between post – test score of breast milk secretion among the postnatal mothers of experimental and control group N=60

Parameter	M ± SD	Mean difference	Unpaired t test	df	p value	Inference
Experimental group	19.90 ± 5.05	2.97	02.389	58	0.0201	Significant
Control group	16.9 ± 4.25					

(p<0.05 significance level) S – Significance

Table 7: Association between the Pre – test level of breast milk secretion among postnatal mothers of Experimental group N= 30

S.no	Demographic Variables	χ ²	df	p value	Inference
1.	Age	16.926	6	0.009	S*
2.	Educational Qualification	12.298	9	0.197	NS
3.	Occupation	10.250	9	0.33	NS

4.	Religion	0.814	3	0.846	NS
5.	Type of family	4.046	6	0.67	NS
6.	Area of residence	7.744	6	0.257	NS
7.	Parity	1.981	6	0.921	NS
8.	Previous breastfeeding experience	1.164	3	0.761	NS
9.	Type of delivery	1.205	3	0.751	NS
10.	Socio- economic status	7.814	9	0.552	NS

Table 8: Association between the Pre – test level of breast milk secretion among postnatal mothers of Control group N= 30

S.no	Demographic Variables	χ^2	df	p value	Inference
1.	Age	5.616	4	0.229	NS
2.	Educational qualification	5.702	6	0.457	NS
3.	Occupation	2.5038	6	0.868	NS
4.	Religion	0.817	4	0.936	NS
5.	Type of family	2.142	4	0.7095	NS
6.	Area of residence	6.428	4	0.1693	NS
7.	Parity	1.765	4	0.7788	NS
8.	Previous breastfeeding experience	0.248	2	0.883	NS
9.	Type of delivery	0.6314	2	0.7292	NS
10.	Socio- economic status	8.285	6	0.2179	NS

In pre-test 3% postnatal mothers having a low breast milk secretion, 30% to 60% postnatal mothers of them were having low normal and normal breast milk secretion and only 7% postnatal mothers having a high breast milk secretion. Where in post- test 47% postnatal mothers having a normal breast milk secretion, 37% and 16% postnatal mothers were having a high and very high breast milk secretion.

In pre-test 10% postnatal mothers having a low normal breast milk secretion, 70% and 20% postnatal mothers them were having a normal and high breast milk secretion. Where in post -test 37% postnatal mothers having a normal breast milk secretion, 60% and 3% postnatal mothers having a high and very high breast milk secretion.

The data presented in table 4 show that comparison of between mean pre- test and post- test of breast milk secretion among the postnatal mothers in experimental group. Paired t- test was to find out the significant mean difference. It reveals that there was a statically significant difference in pre test and post test score at $p < 0.05$. this show that BOM Technique is an effective intervention in improving the breast milk secretion in postnatal mothers.

The data presented in tables 5 show that comparison between mean pre- test and post- test of breast milk secretion among the postnatal mothers in control group. Paired t – test was to find out the significant mean difference. It reveals that there was a statically significant difference in Pre- test and post test score at $p < 0.05$. this show BOM technique intervention helps to improve the breast milk secretion in postnatal mothers.

The data presented in tables 6 show that comparison between post test score of breast milk secretion among the postnatal mothers in experimental and control group. Unpaired t test 02.389 to find out the significant mean difference 2.97. it reveals that there was a statically significant difference at $p < 0.05$. this show that BOM technique intervention is very effective to improve the breast milk secretion in postnatal mothers.

In experimental group there was only age is significant association found and another selected demographic variable is not found at the ($p > 0.05$).

Similarly in control group there was no significant association found between the breast milk secretion demographic variables among postnatal mothers ($p > 0.05$).

DISCUSSION

The first objective was a to assess the breast milk secretion among postnatal mothers.

In pre - test 3% postnatal mothers having a low breast milk secretion, 30% to 60% postnatal mothers of them were having low normal and normal breast milk secretion and only 7% postnatal mothers having a high breast milk secretion. Where in post- test 47% postnatal mothers having a normal breast milk secretion, 37% and 16% postnatal mothers were having a high and very high breast milk secretion.

This study congruent Siti Nurjanah (2020) among 30 postnatal mothers revealed that before the intervention, 87% of mothers had poor milk secretion. After the implementation of the BOM technique, 93% of the mothers showed good milk secretion. This indicating that the BOM technique is effective in enhancing breast milk production.

The second objective to determine the effectiveness of BOM technique on breast milk secretion among postnatal mothers

The present study aimed to evaluate the difference between in pre -test and post -test breast milk secretion among postnatal mothers in experimental and control group, assed before intervention postnatal mother, the result demonstrated a statistically significant improvement in the experimental following the BOM technique intervention at ($p > 0.05$).

Wulandari (2022) investigated the combined effect of oxytocin massage and the Marmet technique The difference was statistically significant with a p-value of < 0.05 , indicating the effectiveness of the combined technique.

The third objective to find the association between the level of breast milk secretion among postnatal mothers with their selected demographic variables.

The third objective interprets in experimental group that at $p > 0.05$ level of significance only age was statistically significant association found with the others demographic variables were no association between breast milk secretion among postnatal mothers. In control there was no association found between breast milk secretion among postnatal mothers

A clinical study evaluated the effect of oxytocin back massage on lactation among postnatal mothers. The results showed that while oxytocin massage supported the milk ejection reflex, the difference in milk secretion levels was not statistically significant compared to mothers who received routine care.

The researchers recommended that by BOM technique is cost-effective, non-pharmacological implementation help to improve the breast milk secretion among postanal mothers

NURSING IMPLICATION

Nursing Education

- In this context of nursing education, BOM technique should include in GNM, B.Sc., M.Sc. Nursing curriculum and nursing student should receive demonstration and return, demonstration of Marmet technique and oxytocin massage. Use of Through chart, models and videos for teaching breastfeeding technique. Conduct- Workshop, seminar and training program on lactation management.
- Improve student clinical competency and evidence -based practice skills

Nursing Practice

The finding of the study has a substantial implication of nursing practice nurse can incorporate BOM technique as a routine part of postnatal care and help in early initiation of breastfeeding and improve breast milk secretion.

Nursing Administer

- Administer can important role in develop a standard protocol/ guideline for BOM technique. And arrange in service education program for nurse. Provide- Adequate privacy and comfortable environment for breastfeeding postnatal mother. Monitor- Implementation of breastfeeding practice and outcomes.
- Support baby – friendly hospital initiative policy.

Nursing research

- This study can provide evidence – based data on effectiveness of BOM technique. Encourage further research on different breastfeeding intervention and long -term effect on infant growth and development and can also replicated in different setting in (Rural/Urban hospital). Help in developing standardized protocol for lactation support

RECOMMENDATION

1. Further studies with a large and more diverse sample size can help in strengthen the evidence base and increasing the reliability of the finding.
2. Comparative research between different technique and standard protocol including traditional verse protocol based or early verse delayed lactation, will provide more insight into the most effective approaches for postnatal mothers

3. Conduct educational programs for postnatal mothers for structured teaching session and demonstration should be organized for postnatal mothers to increase their knowledge and skill regarding BOM technique, enabling them to practice these methods independently.

LIMITATIONS

- Limited sample size if the number of postnatal mothers included is small, it may reduce the statistical power of the study and limit the generalizability of the findings to a larger population.
- Single-center study setting Since the study is conducted only at SVBP Hospital, Meerut, the results may not be applicable to mothers in different hospitals, regions, or healthcare settings with varying practices and demographics.

CONCLUSION

There was a significantly significant noted in the mean breast milk secretion between pre test and post test among postnatal mothers. This show that BOM technique is an effective intervention improving the breast milk secretion in postnatal mothers.

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